

Amendments to the Specification:

Please replace the paragraph beginning on page 1, line 11 of the specification with the following paragraph:

Steering wheel position sensors are used in automotive applications for electronic monitoring of steering functions of a motor vehicle. An example of a current steering wheel position sensor of Delphi of Troy, MI, which is depicted at Figures 1 through 5.

Please replace the paragraph beginning on page 1, line 15 of the specification with the following paragraph:

~~Delphi's conventional~~ The prior art steering wheel position sensor 10 uses non-contacting Hall effect sensor technology, producing dual outputs of indication of steering wheel rotation: a coarse output and a fine output. The conventional steering wheel sensor 10 is designed for electronic control systems requiring steering wheel position input. Typical applications of the conventional steering wheel position sensor 10 include, for example, chassis controlled stability enhancement systems, electrically assisted power steering, steer-by-wire systems and navigation systems.

Please replace the paragraph beginning on page 1, line 23 of the specification with the following paragraph:

As shown at Figures 1 and 2, the conventional steering wheel position sensor 10 includes a housing 14 having a mounting hole 16. The conventional steering wheel position sensor 10 is mounted to the steering column 12 (shown at Figure 1) via the steering column passing through an engagement aperture 20 of a large main gear 22, wherein the hole 16 and the engagement aperture 20 are concentrically aligned with each other. When the steering wheel of the motor vehicle is turned, the steering column 12 rotates the main gear 22 inside the housing 14. The main gear 22 has teeth 22a which rotatably drive a small auxiliary gear 24 via its respective teeth 24a enmeshed therewith. Both of the main and auxiliary gears 22, 24 are composed of DELRIN

100 (DELFIN is a registered trademark of DuPont for an acetal resin material), and each respectively therewithin contain an annular permanent magnet 26a, 26b (see Figure 5). Two linear Hall effect sensors 28a, 28b sense magnetic field rotation of the main gear 22. A pair of linear Hall sensors 28c, 28d, arranged perpendicularly relative to each other ~~28e, 28d~~ (shown best at Figure 4), sense the magnetic field rotation of the auxiliary gear 24. Signals from all four sensors 28a, 28b, 28c, 28d are acquired by a microcontroller 30 and processed to find the instantaneous angle of rotation of the steering column 12. This angle is then used to set the values of the duty cycle for both pulse width-modulated outputs. The microcontroller 30 simultaneously produces two pulse width-modulated outputs based on the values previously set: one output with coarse resolution and a second output with fine resolution, which appear, via suitable wiring, at wires emanating from an electrical connector 18.

Please replace the paragraph beginning on page 3, line 8 of the specification with the following paragraph:

The improved steering wheel position sensor according to the present invention has all components as hereinbefore described with respect to ~~Delphi's conventional~~ the prior art steering wheel position sensor, including the holed housing and apertured main gear, wherein only the environs of the auxiliary gear are now modified.

Please replace the paragraph beginning on page 4, line 12 of the specification under the heading "BRIEF DESCRIPTION OF THE DRAWINGS" with the following paragraph:

Figure 1 is a perspective view of a prior art steering wheel position sensor, also known as an absolute handwheel position sensor (AHPS), ~~manufactured by Delphi Automotive Systems, Troy, MI, shown in operation.~~

Please replace the paragraph beginning on page 5, line 13 of the specification with the following paragraph:

The improved steering wheel position sensor 100 according to the present invention has all components as hereinabove described with respect to ~~Delphi's conventional~~ the prior art steering wheel position sensor 10, including the housing 14 with its mounting hole 16, main gear 22 with its engagement aperture 20, and the sensing electronics, wherein only the environs of the auxiliary gear 24' are now modified to provide an improved auxiliary gear bearing 102 therefor (see Figure 8) according to the present invention.